

## ABSTRACT

A method and an apparatus for machining a mold material to produce a mold. By casting based on a cast mold model (15), a mold material (20) is produced in a form having a work margin. Thereafter, a shape of the mold material (20) is measured by a measuring device (16), and measurement data and an envelope model (M2) generated based on the measurement data are stored in a storage unit (12A) of a computer (12). Thereafter, a mold model (M1) based on mold design data and an envelope model (M2) are displayed on a display unit (12C), and the envelope model (M2) is linearly moved in direction of three axes X, Y and Z orthogonal to one another respectively and rotated around the three axes to bring a product forming plane (M2B) of the envelope model (M2) into close proximity of a product forming plane (M1B) of the mold model (M1). Thereby, a state in which a work amount of a product forming plane (20B) of the mold material (20) is reduced is found, and a reference plane (20A) and a product forming plane (20B) of the mold material 20 are cut by a mold working machine (18) controlled by the computer (12).